

## Amendments to the Specification

At page 6 - Please delete the paragraph commencing at line 19 commencing "Figure 2..."

At page 6 last line please replace the paragraph by:

Figure 2 depicts the resistance versus temperature plot.

At page 7 line 1 replace the paragraph by:

Figure 3(a-c) depicts the magneto-resistive property of the material at different temperatures.

At Page 10 - please amend the paragraph commencing at line 1 to read as follows:

~~Figure 2 shows the scanning electron micro-graph of the as-prepared CrO<sub>2</sub> polymer blend. The gray regions as shown in figure 2 are presumably the~~  
Electron photomicroscopy shows grains that are presumably CrO<sub>2</sub> grains and  
~~the dark regions with~~ interconnecting those grains are regions that ~~are additive~~  
rich regions. Percolation between grains is achieved by doping up to 3 - 8% additive.

At page 10 line 7 please replace the paragraph by the following:

Figure 2 shows the plot of normalized resistance versus temperature plot for the CrO<sub>2</sub> polymer blend with and without the application of an external magnetic field. Note the sharp decrease in resistance at low temperatures below 10°K ~~10K~~. The drop in resistance arises out of inter-grain tunneling when two moments of neighboring grains are forced to align by applying an external magnetic field.

At page 10 line 14 replace the paragraph by the following:

Figures 3(a-c) show ~~shows plots plot~~ of magneto-resistance at different temperatures. The field dependence of resistance is more pronounced at

temperatures below 4°K ~~4K~~ and the percentage of magneto-resistance decreases with increasing temperatures. This is because the moments of each  $\text{CrO}_2$  grain in the polymer blend is so randomly oriented that the external field is unable to force the grains to orient parallel to each other. As a result there is no substantial change in the resistance. However, at low temperatures, inter grain tunneling shows drastic change in resistance as a function of magnetic field.